



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/765,369	01/22/2001	Shino Kanamori	Q62748	8599

7590 09/06/2006

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
WASHINGTON, DC 20037-3213

EXAMINER

MISLEH, JUSTIN P

ART UNIT	PAPER NUMBER
----------	--------------

2622

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/765,369	Applicant(s) KANAMORI ET AL.	
	Examiner Justin P. Misleh	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 5 and 7 - 70 is/are pending in the application.
- 4a) Of the above claim(s) 8, 10 - 40, 43 - 47, 49, 54, and 57 - 62 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 5, 7, 9, 41, 42, 48, 50 - 53, 55, 56, and 63 - 70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to Claims 41, 42, 48, 50 – 53, 55, 56, and 63 – 70 have been considered but are moot in view of the new grounds of rejection. Albeit, Applicant's other arguments filed 20 June 2006 have been fully considered but they are not persuasive.

Claim Rejections – 35 USC § 103 (Claims 1 – 5, 7, 9, and 66)

2. Applicant argues, “Hirose and Swayze (taken alone or in combination) do not teach or suggest [‘a display part [that] displays information related to an operation state of an apparatus used together with [an] input unit, said display part further displaying plural pieces of information indicating a function of each switch in an area provided in the vicinity of each switch’]. Swayze merely discloses a camera having a plurality of switches, but does not disclose displaying information indicating the function of a switch on the display. Accordingly, Applicant submits that one person skilled in the art would not have conceive the claimed displayed part as set forth in claim 1 based on the teachings of Hirose and Swayze.”

3. The Examiner respectfully disagrees with Applicant’s position. Swayze teaches (column 4, lines 36 – 38) that the “mode dial 72 comprises an outer ring surrounding the inner select button 78, which includes markers 80 for selection of four separate directions.” Swayze additionally teaches (column 5, lines 27 – 32) that the “select button 78 includes four raised actuation points: left/right actuation points 128/130 and up/down actuation points 132/134 ... [these points] may constitute separate button segments.” Swayze also indicates (column 5, lines

Art Unit: 2622

32 – 42) that “actuation points 128/130 and 132/134 are used to navigate among the image components displayed on the display ... [color] and finish of the select button(s) 78 might be anything desirable.” Finally, Swayze notes a key advantage of the select button is to provide “a single control presentation that intuitively allows the user to cycle through the available choices and options with a minimum of hassle (column 2, lines 61 – 63).

4. On the other hand, Hirose provides a display button (10) with the option to present “various displays” such as “load use display,” “a display of a plurality of functions or an input screen display from an external unit,” “a display for selecting a plurality of loads,” and “a functional display” (column 3, lines 46 – 53). Hirose additionally discloses (column 4, lines 36 – 46) “[various] types of displays become possible using a program incorporated in an IC.” Finally, Hirose notes (column 1, lines 50 – 66) that a key benefit of the display button is to “enhance distinguishability” by presenting “plural types of displays ... separately displayed and illuminated” in each portion.

5. Thus, the above analysis clearly demonstrates many advantages to combine the teachings of Hirose into the teachings of Swayze. Furthermore, the combined teachings (Swayze in view of Hirose) would certainly yield “a display part [that] displays information related to an operation state of an apparatus used together with [an] input unit, said display part further displaying plural pieces of information indicating a function of each switch in an area provided in the vicinity of each switch,” as claimed. Accordingly, it would have been obvious to one with ordinary with ordinary skill in the art to modify Swayze in view of Hirose.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1 – 5, 7, 9, 41, 42, 48, 50 – 53, 55, 56, and 63 – 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swayze in view of Hirose et al.**

The Examiner notes that Claim 9 fully encompasses the scope of Claim 1. Accordingly, the basis for the rejection of Claim 1 is fully incorporated into the basis for the rejection of Claim 1.

The Examiner additionally notes that Claim 41 fully encompasses the scope of Claim 42. Accordingly, the basis for the rejection of Claim 42 is fully incorporated into the basis for the rejection of Claim 41.

8. For **Claims 1 and 9**, Swayze discloses, as shown in figure 2 – 4 and as stated in columns 4 (lines 30 – 46), 5 (lines 27 – 42 and lines 54 – 67), and 6 (lines 1 – 9), a digital camera (40), comprising:

an image capturing unit (44);

a controlling unit (62) that controls the image capturing unit (44);

a processing circuit (62) that processes signals from the image capturing unit (44);

a display unit (60); and

an operating unit (70) that accepts user input and includes an input unit (78), said input unit (78) comprising:

Art Unit: 2622

an instruction input unit (78), a posture of said instruction input unit capable of being displaced by a pressure applied to a first face (78) thereof (see figure 4);

a switch pressing unit (72) provided in the vicinity of an outer periphery of a face (82) other than said first face (78) of said instruction input unit (78), said switch pressing unit being capable of being displaced in accordance with the displacement of the instruction input unit (see column 4, lines 30 – 46);

a switch part (86) arranged to work by being pressed by said switch pressing unit (72), said switch part (86) comprising a plurality of switches (see figure 4).

The Examiner submits Swayze teaches (column 4, lines 36 – 38) that the “mode dial 72 comprises an outer ring surrounding the inner select button 78, which includes markers 80 for selection of four separate directions.” Swayze additionally teaches (column 5, lines 27 – 32) that the “select button 78 includes four raised actuation points: left/right actuation points 128/130 and up/down actuation points 132/134 ... [these points] may constitute separate button segments.” Swayze also indicates (column 5, lines 32 – 42) that “actuation points 128/130 and 132/134 are used to navigate among the image components displayed on the display ... [color] and finish of the select button(s) 78 might be anything desirable.” Finally, Swayze notes a key advantage of the select button is to provide “a single control presentation that intuitively allows the user to cycle through the available choices and options with a minimum of hassle (column 2, lines 61 – 63).

However, Swayze does not disclose wherein the instruction input unit includes a display part, wherein the first face of the instruction input unit includes a display screen of the display part, wherein said display part displays information related to an operation state of an apparatus

Art Unit: 2622

used together with said input unit, wherein said display part displaying plural pieces of information indicating a function of each switch in an area provided in the vicinity of each switch.

On the other hand and in analogous art, Hirose et al. also disclose a novel input unit for use in an electronic device. More specifically, Hirose et al. teach, as shown in figures 3 – 5 and 8 – 10 and as stated in columns 2 (lines 32 – 51 and 60 – 65), 3 (lines 58 – 65), and 4 (lines 4 – 56), an input unit with an instruction input unit (design display portion 14 @ “approximate central portion”) including a display part (LCD 17) and a first face (design display portion 14) thereof, wherein said first face includes a display screen (LCD 17) of said display part (LCD 17). Hirose et al. further teach a switch part (plunger 29; projecting shaft 31; operating shaft 34; and switch body 32), of a switch pressing unit (display surface 13), arranged to work by being pressed by said switch pressing unit (display surface 13). Finally, Hirose et al. teach wherein said display part is arranged to display information related to an operation state of an apparatus used together with said input unit (see 1st detailed explanation paragraph below) and wherein the information displayed on said display part indicates a function of the switch pressing unit (see 2nd detailed explanation paragraph below).

1) Hirose et al. provides a push-button input unit comprising a central display portion (14) and a peripheral portion (14) surrounding the central display portion (14), wherein pressure applied to either the central display portion (14) and/or the peripheral portion (13) will cause the downwardly projecting shaft (31) of the plunger (29) to connect with lead-out terminals within the operating shaft (34) of the switch body (32). Therefore, the switch pressing unit (13) is displaced in accordance with the instruction input unit (14). Hence, Hirose et al. disclose, as

Art Unit: 2622

shown in figures 8 – 10 and as stated in column 4 (lines 4 – 56), wherein said display part (LCD 17) is arranged to display information related to an operation state of an apparatus (e.g. keyboard) used together with said input unit. Also, the hooked-shaped display portions (15) provided in the switch pressing unit (13) and the display (17) provided in the instruction input unit (14) are operable to represent various modes (see figures 8 – 10) by displaying a plurality of functions (see “the advantages” in column 4).

2) Hirose et al. disclose in column 3 (lines 36 – 65), “the design display portion 14 can present ... a display of a plurality of functions ... from an external unit ... a display for selecting a plurality of loads ... and a display conforming to a mode.” The above teaching of Hirose et al. are a clear indication that the display portion (14) of the switch (11) is displaying information relating to a function of the switch (11); hence, Hirose et al. do in fact disclose displaying of information indicating the function of the switch.

Essentially, Hirose provides a display button (10) with the option to present “various displays” such as “load use display,” “a display of a plurality of functions or an input screen display from an external unit,” “a display for selecting a plurality of loads,” and “a functional display” (column 3, lines 46 – 53). Hirose additionally discloses (column 4, lines 36 – 46) “[various] types of displays become possible using a program incorporated in an IC.” Finally, Hirose notes (column 1, lines 50 – 66) that a key benefit of the display button is to “enhance distinguishability” by presenting “plural types of displays ... separately displayed and illuminated” in each portion.

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have modified the instruction input unit of Swayze with the teachings of Hirose

to form an instruction input unit that includes a display part, wherein the display part displays information related to an operation state of an apparatus used together with the input unit, wherein the display part further displaying plural pieces of information indicating a function of each switch in an area provided in the vicinity of each switch for the advantage of *enhancing distinguishability by presenting plural types of displays, separately displayed and illuminated in each portion* (see Hirose et al.; column 1, lines 50 – 66).

9. As for **Claim 2**, Hirose et al. disclose wherein said instruction input unit (13) presses said switch part (plunger 29; projecting shaft 31; operating shaft 34; and switch body 32) via said switch pressing unit (display surface 13) by being displaced around a position in the vicinity of a center of gravity thereof as a displacement center in a direction perpendicular to a face on which said switch part is provided.

The switch part (plunger 29; projecting shaft 31; operating shaft 34; and switch body 32), the instruction input unit (14) and the switch pressing unit (13) lie within a plane(s) parallel to the plane of which the display (17) resides, as shown clearly in figure 4. The displacement center corresponds to the center of gravity of the instruction input unit (13), the switch pressing unit (14), and the switch part (plunger 29; projecting shaft 31; operating shaft 34; and switch body 32) such that the displacement direction is perpendicular to the instruction input unit (13) plane, the switch pressing unit (14) plane; and the switch part (plunger 29; projecting shaft 31; operating shaft 34; and switch body 32) plane. In other words, the displacement corresponds to an up and down displacement and not a lateral displacement.

10. As for **Claim 3**, Swayze teach, as shown in figure 2 and 4 and as stated in columns 5 (lines 54 – 67) and 6 (lines 1 – 9), a switch part (four-way directional interface 70) includes

Art Unit: 2622

switches (128, 130, 132, and 134) arranged to form at least one pair (up/down 132/134 and left/right 128/130), said switches (128 – 134) of each of said at least one pair being opposed to each other with said displacement center (90) sandwiched therebetween.

11. As for **Claim 4**, Swayze teach, as shown in figure 2 and 4 and as stated in columns 5 (lines 54 – 67) and 6 (lines 1 – 9), a switch part (four-way directional interface 70) includes switches (128, 130, 132, and 134) arranged substantially at an upper position (132), a lower position (134), a right position (130) and a left position (128) with respect to a displacement center (90).

12. As for **Claim 5**, Hirose et al. disclose, as shown in figures 8 – 10 and as stated in column 4 (lines 4 – 56), wherein said display part (LCD 17) is arranged to display information related to functions assigned to switches included in said switch part in the vicinity of said switches, respectively.

The hooked-shaped display portions (15) provided in the switch pressing unit (13) and the display (17) provided in the instruction input unit (14) are operable to represent various modes (see figures 8 – 10) by displaying a plurality of functions (see “the advantages” in column 4).

13. As for **Claim 7**, Hirose et al. disclose, as shown in figures 8 – 10 and as stated in columns 2 (lines 43 – 46) and 4 (lines 4 – 56), wherein said display part (LCD 17) is arranged to display one of a plurality of background colors that is determined in accordance with an operation state of an apparatus (e.g. keyboard) used together with said input unit.

The hooked-shaped display portions (15) provided in the switch pressing unit (13) and the display (17) provided in the instruction input unit (14) are operable to represent various

Art Unit: 2622

modes (see figures 8 – 10) by displaying a plurality of functions (see “the advantages” in column 4).

14. For **Claims 41 and 42**, Swayze discloses, as shown in figure 2 – 4 and as stated in columns 4 (lines 30 – 46), 5 (lines 27 – 42 and lines 54 – 67), and 6 (lines 1 – 9), a capturing apparatus (40) for capturing an image, comprising:

a body having a body face (back surface 40’);and

a switch unit (78) disposed on said body comprising a plurality of switches (86; see figure 4) arranged in surroundings of said switch unit (78);

said switch unit (78) being inclined with said plurality of switches (86) with respect to a plane of said body face, when at least one of the plurality of switches is pressed to function (see figure 4; also see column 5, lines 27 – 42).

The Examiner submits Swayze teaches (column 4, lines 36 – 38) that the “mode dial 72 comprises an outer ring surrounding the inner select button 78, which includes markers 80 for selection of four separate directions.” Swayze additionally teaches (column 5, lines 27 – 32) that the “select button 78 includes four raised actuation points: left/right actuation points 128/130 and up/down actuation points 132/134 ... [these points] may constitute separate button segments.” Swayze also indicates (column 5, lines 32 – 42) that “actuation points 128/130 and 132/134 are used to navigate among the image components displayed on the display ... [color] and finish of the select button(s) 78 might be anything desirable.” Finally, Swayze notes a key advantage of the select button is to provide “a single control presentation that intuitively allows the user to cycle through the available choices and options with a minimum of hassle (column 2, lines 61 – 63).

However, Swayze does not disclose wherein the switch unit includes a central display part, such that the plurality of switches are arranged in the surroundings of the display part and such that the switch unit is inclined together with the display part.

On the other hand and in analogous art, Hirose et al. also disclose a novel input unit for use in an electronic device. More specifically, Hirose et al. teach, as shown in figures 3 – 5 and 8 – 10 and as stated in columns 2 (lines 32 – 51 and 60 – 65), 3 (lines 58 – 65), and 4 (lines 4 – 56), a switch unit (design display portion 14 @ “approximate central portion”) including a central display part (LCD 17). Hirose et al. further teach a switch part (plunger 29; projecting shaft 31; operating shaft 34; and switch body 32), of a switch pressing unit (display surface 13), arranged to work by being pressed by said switch pressing unit (display surface 13).

Essentially, Hirose et al. provides a push-button input unit comprising a central display portion (14) and a peripheral portion (14) surrounding the central display portion (14), wherein pressure applied to either the central display portion (14) and/or the peripheral portion (13) will cause the downwardly projecting shaft (31) of the plunger (29) to connect with lead-out terminals within the operating shaft (34) of the switch body (32). Therefore, the switch pressing unit (13) is displaced in accordance with the display part (17).

Thus, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to have modified the switch unit of Swayze with the teachings of Hirose to form a switch unit which includes a central display part, such that the plurality of switches are arranged in the surroundings of the display part and such that the switch unit is inclined together with the display part for the advantage of *enhancing distinguishability by presenting plural types*

Art Unit: 2622

of displays, separately displayed and illuminated in each portion (see Hirose et al.; column 1, lines 50 – 66).

15. As for **Claim 48**, Swayze discloses, as shown in figure 3, wherein an input unit (14) is arranged on an upper-right side of a center of a face of said capturing apparatus that faces a user when being used (see column 5, lines 5 – 42).

16. As for **Claims 50, 63, and 64**, as indicated above, it would have been obvious to include a display part that displays information related to an operation state of an apparatus used together with the input unit, wherein the display part further displaying plural pieces of information indicating a function of each switch in an area provided in the vicinity of each switch.

Further, as also indicated above, Hirose provides a display button (10) with the option to present “various displays” such as “load use display,” “a display of a plurality of functions or an input screen display from an external unit,” “a display for selecting a plurality of loads,” and “a functional display” (column 3, lines 46 – 53). Hirose additionally discloses (column 4, lines 36 – 46) “[various] types of displays become possible using a program incorporated in an IC.”

However, Hirose also discloses, in figures 8 and 9, wherein the information indicating the function of each switch are changed in accordance with operation state of the apparatus used together with said digital camera.

17. As for **Claim 51**, Hirose et al. teach, as shown in figures 4, 5, and 8 – 10 and as stated in columns 2 (lines 43 – 46) and 4 (lines 4 – 56), wherein the display part (3) selects a background color for display corresponding to a particular operating mode of the apparatus.

Art Unit: 2622

18. For **Claim 52**, Swayze discloses, as shown in figure 2 – 4 and as stated in columns 4 (lines 30 – 46), 5 (lines 27 – 42 and lines 54 – 67), and 6 (lines 1 – 9), a capturing apparatus (40) for capturing an image, comprising:

an input unit (78) including a plurality of switches (86; see figure 4) arranged in the vicinity of outer periphery thereof to form at least one pair (128/130 and 132/134), said switches of each of said at least one pair being opposed to each other (clearly shown in figure 4); and

a second display unit (60) disposed separately from the *input unit (78)* on a different place on the capturing apparatus (40) that the *input unit (78)*, wherein

a means is provided for incorporating at least a part of *function of input unit (78)*, into said second display unit (60; see column 5, lines 43 – 53), and

said least one pair of switches (128/130 and 132/134) being mechanical switches (figure 4).

The Examiner submits Swayze teaches (column 4, lines 36 – 38) that the “mode dial 72 comprises an outer ring surrounding the inner select button 78, which includes markers 80 for selection of four separate directions.” Swayze additionally teaches (column 5, lines 27 – 32) that the “select button 78 includes four raised actuation points: left/right actuation points 128/130 and up/down actuation points 132/134 ... [these points] may constitute separate button segments.” Swayze also indicates (column 5, lines 32 – 42) that “actuation points 128/130 and 132/134 are used to navigate among the image components displayed on the display ... [color] and finish of the select button(s) 78 might be anything desirable.” Finally, Swayze notes a key advantage of the select button is to provide “a single control presentation that intuitively allows the user to

Art Unit: 2622

cycle through the available choices and options with a minimum of hassle (column 2, lines 61 – 63).

However, Swayze does not disclose wherein the input unit includes a central display part (corresponding to first display unit) for displaying first information, such that the plurality of switches are arranged in the surroundings of the first display unit, and such that the first information displayed includes function information assigned to the switches, such that the first displayed information is changed in accordance with a change of the operation mode of the capturing apparatus.

On the other hand and in analogous art, Hirose et al. also disclose a novel input unit for use in an electronic device. More specifically, Hirose et al. teach, as shown in figures 3 – 5 and 8 – 10 and as stated in columns 2 (lines 32 – 51 and 60 – 65), 3 (lines 58 – 65), and 4 (lines 4 – 56), an input unit with an instruction input unit (design display portion 14 @ “approximate central portion”) including a display part (LCD 17) and a first face (design display portion 14) thereof, wherein said first face includes a display screen (LCD 17) of said display part (LCD 17). Hirose et al. further teach a switch part (plunger 29; projecting shaft 31; operating shaft 34; and switch body 32), of a switch pressing unit (display surface 13), arranged to work by being pressed by said switch pressing unit (display surface 13). Finally, Hirose et al. teach wherein said display part is arranged to display information related to an operation state of an apparatus used together with said input unit (see 1st detailed explanation paragraph below) and wherein the information displayed on said display part indicates a function of the switch pressing unit (see 2nd detailed explanation paragraph below).

1) Hirose et al. provides a push-button input unit comprising a central display portion (14) and a peripheral portion (14) surrounding the central display portion (14), wherein pressure applied to either the central display portion (14) and/or the peripheral portion (13) will cause the downwardly projecting shaft (31) of the plunger (29) to connect with lead-out terminals within the operating shaft (34) of the switch body (32). Therefore, the switch pressing unit (13) is displaced in accordance with the instruction input unit (14). Hence, Hirose et al. disclose, as shown in figures 8 – 10 and as stated in column 4 (lines 4 – 56), wherein said display part (LCD 17) is arranged to display information related to an operation state of an apparatus (e.g. keyboard) used together with said input unit. Also, the hooked-shaped display portions (15) provided in the switch pressing unit (13) and the display (17) provided in the instruction input unit (14) are operable to represent various modes (see figures 8 – 10) by displaying a plurality of functions (see “the advantages” in column 4).

2) Hirose et al. disclose in column 3 (lines 36 – 65), “the design display portion 14 can present ... a display of a plurality of functions ... from an external unit ... a display for selecting a plurality of loads ... and a display conforming to a mode.” The above teaching of Hirose et al. are a clear indication that the display portion (14) of the switch (11) is displaying information relating to a function of the switch (11); hence, Hirose et al. do in fact disclose displaying of information indicating the function of the switch.

Essentially, Hirose provides a display button (10) with the option to present “various displays” such as “load use display,” “a display of a plurality of functions or an input screen display from an external unit,” “a display for selecting a plurality of loads,” and “a functional display” (column 3, lines 46 – 53). Hirose additionally discloses (column 4, lines 36 – 46)

Art Unit: 2622

“[various] types of displays become possible using a program incorporated in an IC.” Finally, Hirose notes (column 1, lines 50 – 66) that a key benefit of the display button is to “enhance distinguishability” by presenting “plural types of displays ... separately displayed and illuminated” in each portion.

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have modified the instruction input unit of Swayze with the teachings of Hirose to form an instruction input unit that includes a display part, wherein the display part displays information related to an operation state of an apparatus used together with the input unit, wherein the display part further displaying plural pieces of information indicating a function of each switch in an area provided in the vicinity of each switch for the advantage of *enhancing distinguishability by presenting plural types of displays, separately displayed and illuminated in each portion* (see Hirose et al.; column 1, lines 50 – 66).

19. As for **Claim 53**, Swayze discloses, as shown in figure 3, wherein an input unit (14) is arranged on an upper-right side of a center of a face of said capturing apparatus that faces a user when being used (see column 5, lines 5 – 42). Swayze additionally discloses, as stated in column 5 (lines 43 – 53), wherein said second display unit (60) is arranged to display information related to the function performed by one of the switches (86) of the input unit (78), which includes an upper switch and a left switch.

20. As for **Claim 55**, Swayze teaches (column 4, lines 36 – 38) that the “mode dial 72 comprises an outer ring surrounding the inner select button 78, which includes markers 80 for selection of four separate directions.” Swayze additionally teaches (column 5, lines 27 – 32) that the “select button 78 includes four raised actuation points: left/right actuation points 128/130 and

Art Unit: 2622

up/down actuation points 132/134 ... [these points] may constitute separate button segments.” Swayze also indicates (column 5, lines 32 – 42) that “actuation points 128/130 and 132/134 are used to navigate among the image components displayed on the display ... [color] and finish of the select button(s) 78 might be anything desirable.” Finally, Swayze notes a key advantage of the select button is to provide “a single control presentation that intuitively allows the user to cycle through the available choices and options with a minimum of hassle (column 2, lines 61 – 63).

Also, as indicated above, it would have been obvious to one with ordinary skill in the art to have modified the instruction input unit of Swayze with the teachings of Hirose to form an instruction input unit that includes a display part, wherein the display part displays information related to an operation state of an apparatus used together with the input unit, wherein the display part further displaying plural pieces of information indicating a function of each switch in an area provided in the vicinity of each switch for the advantage of *enhancing distinguishability by presenting plural types of displays, separately displayed and illuminated in each portion* (see Hirose et al.; column 1, lines 50 – 66).

Therefore, the combination of Swayze in view of Hirose would yield wherein said switches are arranged approximately at an upper position, a lower position, a right position and a left position with respect to said first display unit, as claimed.

21. As for **Claim 56**, Swayze discloses, as shown in figure 3, wherein said input unit (78) and said second display unit (60) are arranged on the same plane of a body face of said capturing apparatus (camera back face 40’).

Art Unit: 2622

22. As for **Claim 65**, Swayze discloses, as shown in figure 3, a body (40) on which the *input unit* (78), which via obviousness includes the first display unit, and said second display unit (60) are arranged independently (camera back face 40').

23. As for **Claim 66**, Swayze teach, as shown in figure 2 and 4 and as stated in columns 5 (lines 54 – 67) and 6 (lines 1 – 9), a switch part (four-way directional interface 70) includes switches (128, 130, 132, and 134) arranged to form at least one pair (up/down 132/134 and left/right 128/130), said switches (128 – 134) of each of said at least one pair being opposed to each other with said displacement center (90) sandwiched therebetween. Further, Swayze teach that the switch part (70) is configured to pivot around said displacement center when pressed.

24. As for **Claims 67 and 68**, as indicated above, it would have been obvious to include a display part that displays information related to an operation state of an apparatus used together with the input unit, wherein the display part further displaying plural pieces of information indicating a function of each switch in an area provided in the vicinity of each switch.

Further, as also indicated above, Hirose provides a display button (10) with the option to present “various displays” such as “load use display,” “a display of a plurality of functions or an input screen display from an external unit,” “a display for selecting a plurality of loads,” and “a functional display” (column 3, lines 46 – 53). Hirose additionally discloses (column 4, lines 36 – 46) “[various] types of displays become possible using a program incorporated in an IC.”

However, Hirose also discloses, in figures 8 and 9, wherein the information indicating the function of each switch are changed in accordance with operation state of the apparatus used together with said digital camera.

Art Unit: 2622

25. As for **Claim 69 and 70**, said switch unit (78) being inclined with said plurality of switches (86) with respect to a plane of said body face, when at least one of the plurality of switches is pressed to function (see figure 4; also see column 5, lines 27 – 42).

The Examiner submits Swayze teaches (column 4, lines 36 – 38) that the “mode dial 72 comprises an outer ring surrounding the inner select button 78, which includes markers 80 for selection of four separate directions.” Swayze additionally teaches (column 5, lines 27 – 32) that the “select button 78 includes four raised actuation points: left/right actuation points 128/130 and up/down actuation points 132/134 ... [these points] may constitute separate button segments.” Swayze also indicates (column 5, lines 32 – 42) that “actuation points 128/130 and 132/134 are used to navigate among the image components displayed on the display ... [color] and finish of the select button(s) 78 might be anything desirable.” Finally, Swayze notes a key advantage of the select button is to provide “a single control presentation that intuitively allows the user to cycle through the available choices and options with a minimum of hassle (column 2, lines 61 – 63).

The Examiner previously indicated that it would have been obvious to one with ordinary skill in the art to have modified the switch unit of Swayze with the teachings of Hirose to form a switch unit which includes a central display part, such that the plurality of switches are arranged in the surroundings of the display part and such that the switch unit is inclined together with the display part for the advantage of *enhancing distinguishability by presenting plural types of displays, separately displayed and illuminated in each portion* (see Hirose et al.; column 1, lines 50 – 66).

Thus, the combination of Swayze in view of Hirose would yield wherein said display screen is capable of inclining to a plurality of directions corresponding to said plurality of switches, and at least one of said plurality of switches functions according to the direction to which said display screen inclines, as claimed.

Conclusion

26. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

27. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Justin P Misleh whose telephone number is 571.272.7313. The Examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM.

Art Unit: 2622

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Vivek Srivastava can be reached on 571.272.7304. The fax phone number for the organization where this application or proceeding is assigned is 571.273.3000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JPM
September 1, 2006



VIVEK SRIVASTAVA
PRIMARY EXAMINER